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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

THOMPSON, TIMOTHY J

ART UNIT PAPER NUMBER

2873

DATE MAILED: 07/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/528,670

Applicant(s)

SLINGER, CHRISTOPHER
WILLIAM

Examiner

Timothy J. Thompson

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 19-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 4, 6 and 11-18 is/are rejected.
- 7) ☒ Claim(s) 2, 5, 7-10 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2005 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 07/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 4, 6, 11-13, 15, 16, 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Fateley et al.(U.S. Pat. No. 6,859,275).

Regarding claim 1, Fateley et al. discloses a controller for holding a compensated pattern(fig 17, 22, 108), a first spatial light modulator(fig 17, 18) having a plurality of addressable pixels controlled by the controller (fig 17, 110) each pixel being capable of modulating incident light and collectively replicating the compensated pattern; a scatter plate (fig 17, 16) of known characteristics for scattering light from the first spatial light modulator, optical means(fig 17, 28) for directing light scattered by the scatter plate and presenting a pattern to an observer or detector(fig 17, 20); the compensated pattern being related to both the scatter plate characteristics and to the pattern presented to the observer or detector(fig 17, col 14).

Regarding claim 3, Fateley et al. discloses the controller stores pre-calculated compensated pattern for each pattern to be displayed(col 14).

Regarding claim 4, Fateley et al. discloses the controller (4) is a computer with storage and means for calculating a compensated pattern for each pattern to be displayed(col 14).

Regarding claim 6, Fateley et al. discloses the first spatial light modulator (3) is an electrically addressable liquid crystal spatial light modulator (EASLM) operable either in transmissive or reflective mode(col 17, lines 1-10).

Regarding claim 11, Fateley et al. discloses wherein the incident light is provided by one or more light sources at one ore different wavelengths or broadband (white) light(fig 17, 12).

Regarding claim 12, 13 Fateley et al. discloses wherein the incident light is provided to all pixels in the first spatial light modulator by a single light source(fig 17, 12, col 14, lines 40-45).

Regarding claim 15, Fateley et al. discloses a detector(fig 17, 20).

Regarding claim 16, Fateley et al. discloses the detector is an array of detector elements(claim 28, lines 25-35).

Regarding claim 18, Fateley et al. discloses the detector is a screen for receiving an image and viewing by an observer(col 14, lines 40-65).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fateley et al.(U.S. Pat. No. 6,859,275) as applied to claim 1 above, and further in view of Yamamoto et al.(U.S. Pat. No. 5,329,354) .

Regarding claim 14, Yamamoto et al. does not disclose the incident light is provided by one or more optical fibres. However, Yamamoto et al. discloses the incident light is provided by one or more optical fibres(fig 1, 20, 21). It would have been obvious to one skilled in the art at the time of the invention to use optical fibres to deliver the incident light as shown by Yamamoto et al., with the optical device of Fateley et al., since as shown by Yamamoto et al. since optical fibres to deliver the incident light is commonly done so as to reduce the size of the device its self as well as separating a heat source from the optical device itself.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fateley et al.(U.S. Pat. No. 6,859,275) as applied to claim 1 above, and further in view of Schnelder(U.S. Pat. No. 4,815,819).

Regarding claim 17, Yamamoto et al. does not disclose the detector is a bundle of optical fibres. However, Schnelder discloses the detector is a bundle of optical fibres(fig 3). It would have been obvious to one skilled in the art at the time of the invention to use a detector that is a bundle of optical fibres as shown by Schnelder, with the optical device of Fateley et al., since as shown by Schnelder bundle of optical fibres are commonly used as detectors for due to their high image resolution(col 1, line 16).

Allowable Subject Matter

Claims 2, 5, 7-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. With the allowable features being; the scatter plate has a number of surface features greater than the number of pixels on the first spatial light modulator; the controller is a computer with storage and means for calculating both a computer generated hologram from a human readable format; a second spatial modulator.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Thompson whose telephone number is (571) 272-2342. If the examiner can not be reached his supervisor, Ricky Mack, can be reached on (571) 272-2333.

A handwritten signature in black ink, appearing to read 'Tim Thompson', with a stylized, flowing script.

**TIMOTHY THOMPSON
PRIMARY EXAMINER**